

Remarks:

After entry of this Amendment, claims 1-40 are pending in the subject application. Claims 1 and 21 have been amended to overcome the Examiner's rejections and objections, and claims 23-31 and 35 have been canceled. Claims 36-40 have been added to further define the scope of the invention. Reconsideration of the application as amended is respectfully requested.

The Examiner objected to claim 21 because claim 21 appears to be dependent on itself, when in fact it should be dependent on claim 20. Thus, Applicant has amended claim 21 to be dependent on claim 20. Applicant respectfully requests that the Examiner reconsider withdraw the objection to claim 21 and allow the claim to proceed to issuance.

The Examiner rejected claims 23-31 under 35 U.S.C. § 102(e) as being anticipated by Olivier, United States Patent No. 6,480,885. Applicant has canceled claims 23-31, and therefore, the Examiner's rejection is moot.

The Examiner rejected claims 1-3, 6-10, and 35 under 35 U.S.C. § 103(a) as being unpatentable over Sutcliffe, United States Patent No. 6,249,282 in view of Olivier. The Examiner contends that with regard to claims 1 and 35, Sutcliffe discloses:

providing access to a database of profile information (Figure 1, Element 22 and corresponding text)

registering profile information in the database (Figure 3A, Element 200 and 202 and corresponding text)

The Examiner contends that Sutcliffe discloses matching one user with another and that the end result of the match can be ordered (as in sorted) (Col. 2, line 65 through Col. 3, line 3) which indicates that the result of the match is really a list or a group of users or subscribers with similar characteristics, yet Sutcliffe's reference does not explicitly indicate the multiple fields, grouping said

subscriber with at least two said fellow subscribers to form at least one group, wherein all the subscribers' profile in said group are similar to each other; and the limitation of communicating said subscribers of said group to said subscribers and to better address all limitations of the claim, the Examiner is combining a second reference for Olivier.

The Examiner contends that Olivier teaches:

multiple fields (Figure No. 4, Element No. 402, 406, 412, and 416);  
grouping said subscriber with said at least two of said fellow subscribers to form at least one group based on similarity (Col. 15, line 52 through Col. 16, line 10; see also Col. 14, lines 62-65; see also Col. 20, lines 30-35);  
wherein said multiple fields in each subscriber's profile are similar (Col. 20, lines 55-66, i.e. meet all three sets of acceptance criteria); and  
communicating said subscribers of said group to said subscribers (Col. 20, lines 30-37; see also Col. 24, lines 36-38).

The Examiner further contends that given the intended broad application of the Sutcliffe system, it would have been obvious to a person of ordinary skill in the art at the time of Applicant's invention to modify the teachings of Sutcliffe with the teachings of Olivier to form a group of three or to match at least two users to another one and display the group on a display, as one would like to present the most matches with the best results to the user and at the same time provide the user with a better flexibility in the system to have more than one or two users or subscribers in the group, for instance in a discussion group, increasing the flexibility would lead to a more successful discussion by having more than one or two opinions to participate.

With regard to claim 2, the Examiner contends that Sutcliffe discloses biographic information of the subscriber (Figure 2A, Element No. 50, 54, and 54A). With regard to claim 3, the Examiner contends that Sutcliffe discloses personal preferences of the subscriber (Figure 2A, Element No. 52). With regard to claim 6, the Examiner contends that the limitation of this claim has been noted in the rejected claim 1, above. It is therefore rejected as set forth above. With regard to

claim 7, the Examiner notes that Olivier discloses utilizing subscriber's own matching criteria for establishing an acceptable level of similarities (Col. 19, lines 56-58). Regarding claim 8, the Examiner contends that Olivier discloses a selected meeting time (Col. 10, lines 28-30) and notifying said subscribers of meeting time (Col. 10, lines 31-33). Lastly, with regard to claims 9 and 10, the Examiner contends that Olivier discloses posting messages and real-time also (Col. 25, lines 32-34).

Applicant respectfully notes that the above-noted claims have been amended to further distinguish the invention over the prior art. As a point of clarification, Applicant respectfully notes that the subject application is not intended to claim rights over the creation of a group since there is substantial prior art describing the creation of groups such as bulletin boards, newsgroups, and prior art described in Olivier. Applicant does, however, wish to show that the method described in this application for creating a group is substantially different from other methods covered in prior art and that the subject application does provide a substantially improved method over the prior art.

Applicant's response and amended claims have been revised to better focus on two distinct areas that are substantially different and superior to the prior art and covered in applicant's amended claims. The two distinct areas are as follows:

1. Matching Method Type; and
2. Matching Preference Types.

#### **MATCHING METHOD TYPE**

Based on reviews of Olivier, Sutcliffe, and Applicant's application and other prior art, Applicant proposes that there are four general types of methods used to create groups. While the first three methods are cited in the prior art, the fourth method, "Multi-way" matching is not listed in the prior art and is covered in Applicant's amended claims:

- **Manual Matching Method** - This manual method revolves around the manual initial creation of a group (e.g., newsgroup, bulletin board, etc..) and subsequent addition of subscribers as they search out and manually join that group. This method is likely the most common type of method used to create a group of subscribers. There are many variations to this method, but typically a group revolves around one or two characteristics that all subscriber's share. Examples of this would be a travel group where subscribers have an interest in traveling or a golf group where subscribers play golf or have expressed an interest in playing golf. One could argue that this method is essentially a version of one-way or two-way matching (below) whereby all subscribers in that group match the theme (typically one or two preferences) said group.
- **One-Way Matching** - This method is used to form a group where all subscribers placed into a group have characteristics that match the preferences (i.e., criteria) of a single subscriber of that group. Olivier references one-way matching to create groups (Col 5 lines 27-32; Col 11 lines 9-12). Refer to "One-way" Matching in Appendix A for a graphical representation of this method.
- **Two-Way Matching** - This method is used to form a group around an individual where each new subscriber placed into a group has characteristics that mutually match with the same subscriber (i.e., prime subscriber) of that group. In other words, the characteristics of the "prime" subscriber must reflect the preferences of all other subscribers in the group and all other subscribers in the group must have characteristics that match the "prime" subscriber. Two way matching will not, however, ensure similarity between "other" (non-prime) subscribers within the group since this matching step between "other" subscribers is not

performed. Olivier references two-way matching to create groups (Col 5 lines 27-32; Col 11 lines 24-28). Two-way matching is also well established in other prior art. Refer to “Two-way” Matching in Appendix A for a graphical representation of this method.

- **Multi-Way Matching** - This method is used to match three or more subscribers into a group from database such that each subscriber’s characteristics match the preferences of every other subscriber in that group. This ensures that all subscribers in the group are compatible. Note that the development of the group revolves around all subscribers and not a single subscriber or previously established group. Multi-way matching, is covered in Applicant’s patent application and not covered in prior art. Refer to “Multi-way” Matching in Appendix A for a graphical representation of this method. Please note that similar representation can also be found in figure 14B of patent application.

It should be noted that Olivier’s patent additionally describes another matching method used to extend a group which could be categorized as using a **modified two-way** matching method (see example listed in Col 20 line 30 through Col 21 line 28). Using this method, a group is first manually established by a “founding” group of subscribers and then expanded to include others into the group by adding one subscriber at a time using two-way matching followed by a manual invitation, acceptance and preferences merging process. To find new subscribers, the criteria of the founding subscribers is combined (Col 21 lines 10-11) through data intersection techniques (Col 21 lines 15-20) into a single set of preferences which is then compared to other “outside” subscriber profiles to find a matching subscriber. As such, since it is the founding subscribers that “self select” and create the initial starting group, this method does not create a group, but rather provides a way to find and add new subscribers to a group. Moreover, given that two-way matching is employed to

find new subscribers (between the groups combined preferences and each candidate subscriber), only one new subscriber may be added to the group during each cycle since, adding more subscribers during a cycle could result in incompatibilities between the new subscribers.

As compared to prior art methods of creating groups, multi-way matching is unique and novel as described below:

1. **Manual Matching Comparison** - Although the manual method works well and is used extensively throughout the internet, for this method one must manually create a group and then users must manually decide to join the group based on their judgment. Manual matching does not require a subscriber to complete a profile that is then compared with other subscribers based on similarities for creation of the initial group and inclusion that group, whereas with multi-way matching the group is created and subscribers included within that group based on similarities.
2. **One-Way Matching Comparison** - Although one-way matching works well to include subscribers that match the preferences of a single subscriber, the other subscribers chosen for the group may well be incompatible with the stated subscriber since their preferences are not matched against the stated subscribers characteristics. Furthermore, since no matching is performed between the other subscribers in the group, the other subscribers included within the group may not be mutually compatible.
3. **Two-Way Matching Comparison** - Although two-way matching works well to ensure the mutual compatibility of a single subscriber to the other subscribers included in a group, the other subscribers included in the group may not be mutually compatible with each other since matching is not performed between each of these subscribers.

**4. Modified Two-Way Matching Comparison** - Although modified two-way matching works to help ensure the similarity of subscribers in a group, there are three shortcomings to the groups created by this method as compared to multi-way matching.

- First, this group formation method requires that a founding group first be manually established by the founders where they use a system to manually select the subscribers of this group. Additionally, the starting common preference set, around which subsequent new subscribers are added, is manually established by the initial manual creation of the group. Multi-way matching, on the other hand, can be used to fully select the entire group during one cycle without manual intervention and subscriber judgment being required.
- Second, modified two-way addresses the addition of subscribers to the established group, but only one new subscriber can be added to the group during each matching cycle since adding more could result in earlier described mutual incompatibilities between these subscribers. For the purpose of adding new subscribers to a group, multi-way matching has the advantage over modified two-way since it can find and select multiple mutually compatible subscribers to be added to group during one cycle and doesn't require a manual intervention process to invite and accept new subscribers into the group as does modified two-way matching.
- Third, modified two-way matching does not necessarily guarantee compatibility of all subscribers in a group since it's unclear to one skilled in the art as to how weighted preferences would be handled. Weighted preferences are the most common preferences used in matching situations. For clarification purposes, an example of a

weighted preference would be the answer to a golf question (see below) where a subscriber specifies the importance of a characteristic for potential matching subscribers with “1” being not important, “2” being somewhat important, “3” very important and “4” being essential. To find new potential subscribers for the group, the modified two-way method compares a “combined” group preference set against each new potential subscriber’s characteristics, whereas multi-way uses the original preferences intact. Modified two-way matching does not address how weighted preferences can be combined into a single preference set. Although Olivier’s patent describes how the intersection can be used to combine non-weighted questions such as age preference (Col 21 lines 15-20), he does not address how weighted questions such as the golf preference can be combined. Moreover, one skilled in the art could not clearly determine how this would be combined.

Combination Example Preferences:

Subscriber 1’s golf preference is “1 not important”  
Subscriber 2’s golf preference is “4 essential”

One skilled in the art might assume that the intersection would be a null set (no preference) which is an invalid. Or, would one skilled in the art assume that the answer is 2.5 (i.e., the average of the two) thus violating the intersection technique described?

- Finally, modified two-way matching potentially shows at least one practical inadequacy such as allowing the inadvertent creation of a founding group with a highly restrictive combined preference set which would, in essence, restrict this



group from adding any new subscribers. This is a substantial possibility given that many profiles include 10, 20 or even more preference selections.

The amended claim language included in applicant's claims is constructed to help ensure that the multi-way method is delineated from self-selection, one-way, two-way and modified two-way matching methods. To illustrate that some of this claim language differentiates multi-way, the section below includes some of the new claim language along with a brief explanation.

**Verbiage below was taken from claim #36**

“grouping said subscriber with at least two of said fellow subscribers to form at least one group based on similarity between subscribers in said group; utilizing an algorithm whereby a group is formed when the characteristics of each subscriber in said group are compared to and reflect the preferences of every other subscriber in said group; and”

Since the group is formed using an algorithm, the manual method is excluded from potentially being described by the above claim verbiage. The one-way and two-way matching methods are excluded because “the characteristics of each subscriber in the group are compared to and reflect the preferences of every other subscriber” implies a multi-way match which neither cover. Finally, the modified two-way is excluded since it does not create a group, but rather adds subscribers to a group with an already established common preference set. Additionally, it contains the same constraints as do two-way matching, thus excluding modified two-way.

**Verbiage below was taken from claims #37, and #38**

“utilizing an algorithm that selects all subscribers for inclusion in the group whereby a group is formed when the characteristics of each subscriber in said group are compared to and reflect the preferences of every other subscriber in said group; and”

Since the group is formed using an algorithm, the manual method is excluded from potentially being described by the above claim verbiage. The one-way and two-way matching

methods are excluded because “the characteristics of each subscriber in the group are compared to and reflect the preferences of every other subscriber” implies a multi-way match which neither cover. Finally, the modified two-way is excluded since it does not “select all subscribers for inclusion in the group”, but rather adds subscribers to a group with an already established common preference set. Additionally, it contains the same constraints as do two-way matching, thus excluding modified two-way.

### **MATCHING PREFERENCE TYPES**

Applicant proposes that subscriber preferences could be categorized into individual preferences and group preferences. Based on reviews of Olivier and Sutcliffe, individual preferences are covered by prior art. However, the second category, “group preferences” is not listed in prior art and is covered in applicant’s amended claims:

- **Individual Preferences** - These preferences describe the characteristics that a given subscriber would like to see in each subscriber included in their group. For example, a given subscriber might like to only be matched to people within five years of their age or who like golf. Olivier, Sutcliffe, and applicant reference individual preferences.
- **Group Preferences** - These preferences describe the characteristics of the group as a whole. Application describes and refers to this type of preference in the background section as “group-specific” parameters. One of the examples listed in patent application is preferred group size which would be important if subscriber were attempting to set up groups such as a golf four- some, a basketball team or even a bowling league.

Group preferences are differentiated from individual preferences in that group preferences are critical to defining the group as a whole, whereas, individual preferences are key to defining the characteristics of each subscriber in the group.

According, claim language that differentiates this application in those terms has been added to applicant's claims and is of the form:

**Verbiage below was taken from claims #38 and #39**

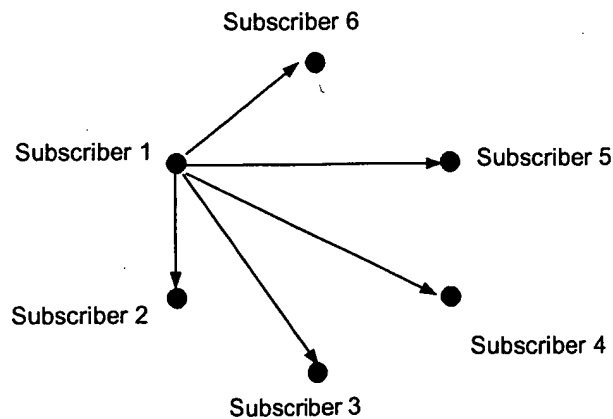
“grouping said subscriber with at least two of said fellow subscribers to form at least one group based on similarity of group-specific and individual preferences included in each subscriber's profile;”

## APPENDIX A

This appendix includes graphical illustrations of the different matching methods that can be used to create groups. Modified two-way matching is not included, since it is based on two-way matching illustrated below. The arrows indicate the direction of the match.

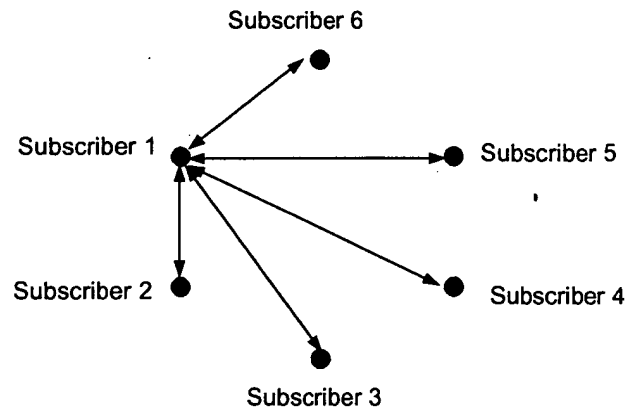
In one-way matching, the arrow pointing from subscriber #1 to subscriber #2 indicates that the preferences of subscriber #1 are being compared to subscriber #2's characteristics. It also suggests that the group is being formed around subscriber #1.

### One-Way Matching



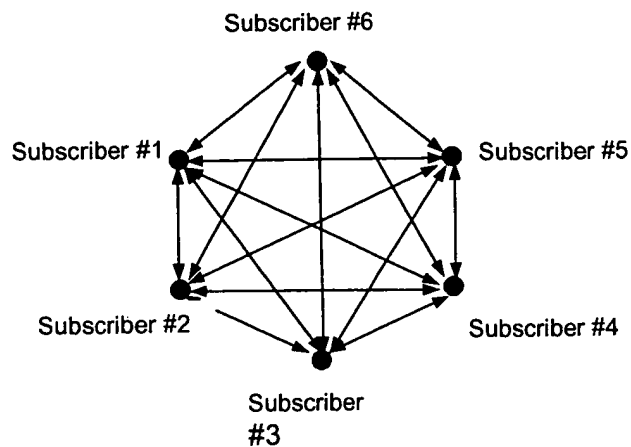
In two-way matching, the lines point in both directions indicating that characteristics for each of the two subscribers connected by this line match the other's preferences. Given all lines originate from subscriber #1, the group is being formed around subscriber #1.

### Two-Way Matching



In multi-way matching, the characteristics of each subscriber in a group must match the preferences of all other subscribers in the group. Note that the development of the group revolves around all subscribers and not a single subscriber.

### Multi-Way Matching



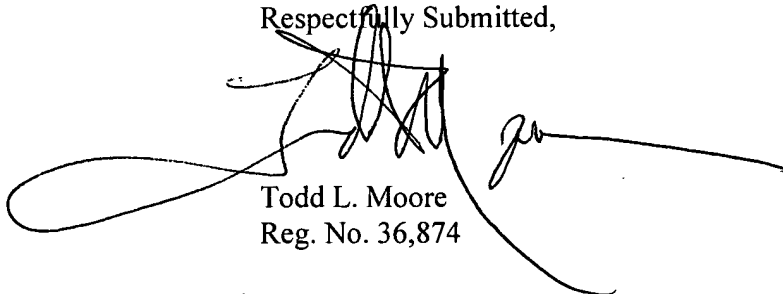
For all matching methods listed above, please note that the word "match" is not meant to imply a perfect match, but rather to imply a level of similarity.

The Examiner noted that claims 4-5, 20, 22, and 32-34 are allowed over the prior art of record. In addition, the Examiner noted that dependent claim 21 would be allowable if rewritten to overcome the minor informality rejection stated above in the Office Action.

For the foregoing reasons and in light of the amended claims, Applicant respectfully requests that the rejections and objections be withdrawn and the claims be allowed to proceed to issue.

The Examiner is invited to contact Applicant's undersigned counsel at (734) 662-0270 or by electronic email at [tlmyb@aol.com](mailto:tlmyb@aol.com) if the Examiner should have any questions concerning this paper.

Respectfully Submitted,

A handwritten signature in black ink, appearing to be "Todd L. Moore", is written over the typed name and registration number. The signature is stylized with a large loop at the end.

Todd L. Moore  
Reg. No. 36,874

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